

## **EnergySmart School Resources Guide**

This guide book includes helpful links for K-12 Teachers, Administrators, and Students. Each link address will be followed by the name of the web site and any other available information involving site resources or helpful materials.

<b>Organization</b>	<b>Website</b>	<b>Teacher</b>	<b>Student</b>	<b>Admin.</b>	<b>Notes</b>
<b>Alliance to Save Energy</b>	<a href="http://www.ase.com">www.ase.com</a>	√		√	Alliance to Save Energy offers free hands-on, multidisciplinary educator lesson plans for elementary, middle and high school.
<b>Consumers Energy - Kids Site</b>	<a href="http://www.consumersenergy.com/kids">www.consumersenergy.com/kids</a>	√	√		Section for teachers and students to learn more about energy.
<b>Creative Change</b>	<a href="http://www.creativechange.net">www.creativechange.net</a>	√			Creative Change provides professional development and curriculum for K-12 schools. The organization also develops courses and provides consulting for higher education institutions. They create educational programs in partnership with nonprofit and governmental organizations.
<b>Department of Energy - Kids Page</b>	<a href="http://www.eia.doe.gov/kids">www.eia.doe.gov/kids</a>	√	√		Sponsored by the U.S. Department of Energy (DOE)
<b>Dr. E's Energy Lab</b>	<a href="http://www1.eere.energy.gov/kids">www1.eere.energy.gov/kids</a>		√		Information for students presented in a fun format with flash
<b>Energized Learning</b>	<a href="http://www.energizedlearning.lbl.gov">www.energizedlearning.lbl.gov</a>	√	√		Sponsored by the U.S. Department of Energy
<b>Energy Education and Training</b>	<a href="http://www1.eere.energy.gov/education">www1.eere.energy.gov/education</a>	√	√	√	Resources to help bring energy education into the classroom.
<b>Energy Hog</b>	<a href="http://www.energyhog.org">www.energyhog.org</a>	√	√		Web page for teachers and students on energy waste
<b>Energy Quest</b>	<a href="http://www.energyquest.ca.gov">www.energyquest.ca.gov</a>	√	√		Fun online flash program for learning about energy
<b>Energy Smart Schools</b>	<a href="http://www.energysmartschools.gov">www.energysmartschools.gov</a>	√		√	Energy education resources for teachers and administrators

<b>Organization</b>	<b>Website</b>	<b>Teacher</b>	<b>Student</b>	<b>Admin.</b>	<b>Notes</b>
<b>Environmental Education and Training Partnership</b>	<a href="http://www.eetap.org">www.eetap.org</a>	√		√	Site promotes achievement in the classroom through energy education. EETAP is a national leader in the delivery of environmental education training.
<b>EPA - Global Warming - Kids Site</b>	<a href="http://www.epa.gov/globalwarming/kids">www.epa.gov/globalwarming/kids</a>	√	√		Sponsored by the U.S. Environmental Protection Agency. Focuses on Global Warming and our climate. (EPA)
<b>EPA - Site for all</b>	<a href="http://www.epa.gov/epahome/students.htm">www.epa.gov/epahome/students.htm</a>	√	√		Sponsored by the U.S. Environmental Protection Agency.
<b>Great lakes Renewable Energy Association</b>	<a href="http://www.glrea.org">www.glrea.org</a>	√		√	GLREA has worked with the DOE to provide the Solar Schools Program to Michigan schools. They are working with energy curriculum for teacher training.
<b>Kid Wind</b>	<a href="http://www.kidwind.org">www.kidwind.org</a>	√		√	Kid Wind offers three programs: 1) Kits to build wind turbines in the classroom, 2) PowerPoint presentations about wind energy for the classroom, and 3) Workshops for teacher and others who are interested.
<b>Michigan Energy Office</b>	<a href="http://www.michigan.gov/energyoffice">www.michigan.gov/energyoffice</a>			√	Information on government programs, incentives and grants
<b>National Energy Education Development Program (NEED)</b>	<a href="http://www.need.org">www.need.org</a>	√		√	NEED partners with DOE's Rebuild America and Energy Smart Schools programs by providing energy curriculum materials. They offer: 1) Workshops in energy for educators teaching K-12, and 2) an energy education curriculum.

<b>Organization</b>	<b>Website</b>	<b>Teacher</b>	<b>Student</b>	<b>Admin.</b>	<b>Notes</b>
<b>National Teacher Training Institute</b>	<a href="http://www.thirteen.org/edonline/ntti">www.thirteen.org/edonline/ntti</a>	√		√	Provides teachers with the vision, strategies and resources to use in the classroom
<b>U.S. Department of Energy</b>	<a href="http://www.energy.gov">www.energy.gov</a>	√		√	Features news and updates on what's happening with energy in our country
<b>Upland Hills Ecological Awareness Center</b>	<a href="http://www.uheac.org">www.uheac.org</a>	√		√	Upland Hills Ecological Awareness Center offers two ways to learn: 1) On-site tours or off-site presentations that include interactive, multi-media and hands-on demonstrations tailored for both adult and youth groups and 2) Eco-badge for Girl Scouts/ Energy Merit Badge for Boy Scouts.
<b>Urban Options</b>	<a href="http://www.urbanoptions.org">www.urbanoptions.org</a>	√		√	Urban Options offers tours of their energy Demonstration House, school programs, and energy lessons for youth. They provide a hands-on presentation to school age children where they will learn ways to save energy.

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# Teachers

## Alliance to Save Energy

<http://www.ase.org>

The Alliance to Save Energy promotes energy efficiency worldwide to achieve a healthier economy, a cleaner environment, and greater energy security.

- Up to date energy news
- Free hands on lesson plans

## Consumers Energy – Kids Site

<http://www.consumersenergy.com/kids>

Sections for teachers and students to help learn about energy and ways to incorporate the activities into their classrooms.

- Curriculum resources
- Lesson Plans
- Educational Programs

## Creative Change

<http://www.creativechange.net>

This site created by a former teacher offers professional development and other resources for K-12 classrooms

- Teacher Training
- Curriculum Resources
- Educational programs

## Department of Energy – Kids Page

<http://www.eia.doe.gov/kids/>

- Energy facts pages
  - Uses of energy, science of energy, energy savings
- Classroom Activities
  - Experiment, classroom resources, Energy news
- Related Links
- Glossary of Terms

## **Energized Learning**

<http://energizedlearning.lbl.gov>

Energized Learning is sponsored by the U.S. Department of Energy, office of Building Technology and includes information for teachers and students.

- Lesson plans
- Classroom – Material resources
- Links & Glossary of Terms

## **Energy Education and Training**

<http://www1.eere.energy.gov/education>

Resources to help bring energy education into your classroom. Topics include; how energy works, how to conserve it and how renewable energy helps our environment.

- Educational opportunities for teachers
- Lesson plans
- Energy Education programs
- Student contest

## **Energy Hog**

<http://www.energyhog.org>

Web page for teachers with information on how to learn where energy is wasted in the home and how to stop energy loss.

- Energy Hog challenge guides
- Green schools program

## **Energy Quest**

<http://www.energyquest.ca.gov/>

Fun online flash program for students and teachers to learn about energy in a fun new way. Site sponsored by the California Energy Commission.

- Resources for teaching
- Web sites with lesson plans
- Energy organizations, list serve, and education bulletin board
- Teacher training and workshops

## **Energy Smart Schools**

<http://energysmartschools.gov/>

Energy education resources for teachers and administrators.

- Many available documents on energy and teaching energy in the classroom
  - Some recommended reading
    - 10 reasons why teaching about energy is essential
    - Get your students interested in energy

## **Environmental Education and Training Partnership**

<http://www.eetap.org>

Web site for teachers which promotes achievement in the classroom through energy education for students. EETAP is a national leader in the delivery of environmental education training for educational professionals.

- Cd's on teaching energy in the classroom
- Online classes
- Workshop and other training opportunities

## **EPA – Global Warming – Kids Site**

<http://www.epa.gov/globalwarming/kids/index.html>

Site sponsored by the U.S. Environmental Protection Agency. Focuses on global warming and gives students fun options to learn about the effects on our world climate.

- Flash animations (grades 5-9)
- Greenhouse gas calculators
- Classroom activity kits

## **EPA – Educational Site for all grade levels**

<http://epa.gov/epahome/students.htm>

Links to information to help with teaching energy topics, getting recognition for your projects, and ways to help get students involved with energy efficiency.

- Resources on all areas of our environment and energy consumption
- Publications
- Awards for students
- Grants and workshops
- Community service projects

## **Great Lakes Renewable Energy Association**

<http://www.glrea.org>

This program offers seminars and other resources for teachers to bring into the classroom. There are also learning opportunities for others within the district to learn about ways they too can save energy.

- Renewable Energy
- Solar photovoltaic training



## **Kid Wind**

<http://www.kidwind.org>

The KidWind Project is a team of teachers, students, engineers and practitioners exploring the science behind wind energy in classrooms around the US.

- Teacher and other interested parties training
- Curriculum Resources

## **National Energy Education Development Program (NEED)**

<http://www.need.org>

- Membership information
  - Catalog and material guides
- Curriculum Materials
- Training Programs
- Energy info Books and activities
- Other information
- Newsletters, polls, forums, youth awards.

## **National Teaching Training Institute**

<http://www.thirteen.org/edonline/ntti>

The National Teacher Training Institute (NTTI) provides teachers with the vision, strategies, and resources they need to make dynamic use of classroom technology.

- Lesson plan database
- Free online workshops and classes
- Education events calendar

## **Project Learning Tree**

<http://www.plt.org>

Environmental education program designed for teachers working with youth from pre-school through grade twelve.

- Curriculum guides
- Workshops and other training available
- Online store
  - Books and other classroom resources for different age groups

## **The Electric Universe**

<http://aep.electricuniverse.com/html/index.html>

The Electric Universe is a safety and educational site with sections designed for various groups.

- Lesson plans
- References
- Experiment ideas

## **U.S. Department of Energy**

<http://www.energy.gov>

A government web site with information for teachers to read up on what's happening in the federal government and Michigan involving energy.

- News updates on energy in Michigan
- Information available on all fifty states and energy news
- Links to all state energy offices

## **Upland Hills Ecological Awareness Center**

[www.uheac.org](http://www.uheac.org)

The center offers tours and presentations with interactive, multi-media, and hands on demonstrations. There are also badges for Girl/Boy Scouts available to troops.

- Field trips
- Tours
- Badges

## **Urban Options**

<http://www.urbanoptions.org>

Urban Options is a non-profit community agency which provides energy and environmental information and services. Urban Options seeks to improve the environmental quality of our Urban Spaces.

- Tours of their Demonstration House
- School programs and curriculum
- Field Trips with hands on presentations

# Students

## Consumers Energy – Kids Site

<http://www.consumersenergy.com/kids>

Sections for teachers and students to help learn about energy and ways to incorporate the activities into their classrooms.

- Online Assignments
- Games
- Careers

## Department of Energy – Kids Page

<http://www.eia.doe.gov/kids/>

Information for students in various forms for energy education

- Energy Facts
  - Uses of Energy, Science of Energy, Saving Energy
- Fun and Games
  - Quizzes, puzzles, field trip ideas
- Energy History
  - Timeline of Energy, Famous people in energy

## Dr. E's Energy Lab

<http://www1.eere.energy.gov/kids>

Information for students presented in a fun format with flash available.

- Wind and Solar Energy
- Geothermal Energy
- Alternative fuels
- Energy efficiency

## Energized Learning

<http://energizedlearning.lbl.gov>

Students will find their many parts to this web site to be used in correlation with the teacher resources section.

- Energy myths
- Glossary of terms
- Lesson plans

## **Energy Education and Training**

<http://www1.eere.energy.gov/education>

Resources for students to learn more about the environment and what part they can play in the future

- Science projects
- Resources for report writing
- Energy Careers
- College degrees, programs, and scholarships
- Internships and job listings

## **Energy Hog**

<http://www.energyhog.org/>

This kids section contains information on energy efficiency and how to spot an energy hog in their homes.

- Training games
- Scavenger hunt
- Information and guides on spotting appliances which waste energy

## **Energy Quest**

<http://www.energyquest.ca.gov/index.html>

Online flash program for students to learn about energy in a new way. Site sponsored by the California Energy Commission.

- Fun interactive games
- Links and Resource library
- How to save energy
- FAQ section on Energy
- Energy Time machine (Time line) and important energy scientist
- Science projects
- The story of energy
- Homework help

## **EPA – Global Warming – Kids Site**

<http://www.epa.gov/globalwarming/kids/index.html>

A flash animation web site which allows students to explore and learn about energy in a new way.

- Games and Puzzles
- Information on global warming, the greenhouse effect, and our climate
- How to make a difference

## **EPA – Educational Site for all grade levels**

<http://www.epa.gov/epahome/students.htm>

This site contains hundreds of link for each age group to find more information on our environment and energy use.

- Kids (Ages 4-10, Grades PreK – 4<sup>th</sup>)
  - Information is presented in a fun easy to use form for younger users
  - Recycling, plants and animals, your environment
- Student Center (Grades 5-8)
  - Club projects
  - Internships and scholarships
  - Ecosystem information
  - Conservation techniques
- High School (Grades 9-12)
  - Air
  - Conservation
  - Health and Safety,  
Ecosystems & Water
  - News and Publications

## **The Electric Universe**

<http://aep.electricuniverse.com/html/index.html>

The Electric Universe is a safety and educational site with sections designed for various groups.

- Games for each age group
- Calendar section

# Administrators

## Alliance to Save Energy

<http://www.ase.org>

The Alliance to Save Energy promotes energy efficiency worldwide to achieve a healthier economy, a cleaner environment, and greater energy security.

- Up to date energy news
- Free hands on lesson plans

## Energy Education and Training

<http://www1.eere.energy.gov/education>

Resources help make school buildings more energy efficient. Also covered are alternative fuels and vehicle technologies for school buses.

- Educational opportunities for teachers
- Energy Education programs
- Student contest

## Energy Smart Schools

<http://energysmartschools.gov/>

Energy education resources for teachers and administrators.

- Many available documents on saving energy with school transportation
  - Some recommended reading
    - Petroleum-Fueled school buses
    - Alternative fuels data center

## Environmental Education and Training Partnership

<http://www.eetap.org>

Web site for teachers which promotes achievement in the classroom through energy education for students. EETAP is a national leader in the delivery of environmental education training for educational professionals.

- Cd's on teaching energy in the classroom
- Online classes
- Workshop and other training opportunities

## Great Lakes Renewable Energy Association

<http://www.glrea.org>

This program offers seminars and other resources for teachers to bring into the classroom. There are also learning opportunities for others within the district to learn about ways they too can save energy.

- Renewable Energy
- Solar photovoltaic training

## **Kid Wind**

<http://www.kidwind.org>

The KidWind Project is a team of teachers, students, engineers and practitioners exploring the science behind wind energy in classrooms around the US.

- Teacher and other interested parties training
- Curriculum Resources

## **Michigan Energy Office**

<http://www.michigan.gov/energyoffice>

Your stop to find information on government programs, initiatives, and grants.

- Energy audits
- Enrollment in Rebuild Michigan Program and Free services

## **National Energy Education Development Program (NEED)**

<http://www.need.org>

- Membership information
  - Catalog and material guides
- Curriculum Materials
- Training Programs
- Energy info Books and activities
- Other information
  - Newsletters, polls, forums, youth awards.

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## **Urban Options**

<http://www.urbanoptions.org>

Urban Options is a non-profit community agency which provides energy and environmental information and services. Urban Options seeks to improve the environmental quality of our Urban Spaces.

- Tours of their Demonstration House
  - School programs and curriculum
- Field Trips with hands on presentations



## K-12 Energy Education Resources

Organization	Contact Information	Website	Teacher Training	Curriculum Resources	Michigan Field Trip Options	Notes
<b>Consumers Energy</b>	Lansing, MI 48937-0001 (800)477.5050 education@consumersenergy.com	<a href="http://www.consumersenergy.com">www.consumersenergy.com</a>		✓		Consumers Energy offers two options: 1) Lesson plans, teacher guides and activities designed to help teach students about gas and electric safety, conservation, recycling and environmental awareness and protection and 2) Classroom programs.
<b>E.E.K! Sustainable Futures Group</b>	D Jones sustainablefutures@hotmail.com		✓	✓		Energy Education Kit Project (E.E.K!) offers a K-12 energy education curriculum module set and pilot teaching and learning program that emphasizes renewable and sustainable forms of energy.
<b>Energy Information Administration</b>	Stacy MacIntyre 1000 Independence Ave, SW Washington, D.C. 20585 (202)586.9795 stacy.macintyre@eia.doe.gov	<a href="http://www.eia.doe.gov">www.eia.doe.gov</a>		✓		EIA offers a selection of stories, hands-on activities and research articles for students of all learning styles and levels.
<b>Michigan Department of Environmental Quality - Michigan Environmental Education Curriculum Support (MEECS)</b>	Thomas Occhipinti, DEQ Environmental Education Coordinator occhipit@michigan.gov	<a href="http://www.michigan.gov/deq-meeecs">www.michigan.gov/deq-meeecs</a>		✓		As a result of the Clean Michigan Initiative Funds, DEQ has worked with the Dept. of Education to develop and disseminate sound science-based supplementary environmental curriculum materials for Michigan educators. The Energy Resources unit covers topics such as energy consumption and use, electricity generation, renewable and non-renewable energy resources, energy conservation and efficiency, pollution prevention, ecological footprint, stewardship and sustainability.
<b>Michigan Biomass Energy Curriculum</b>		<a href="http://www.macd.org/macd_biomass.html">www.macd.org/macd_biomass.html</a>		✓		The Michigan Association of Conservation Districts (MACD) created this curriculum to educate students about alternatives to conventional energy sources and how their choices can affect our environment.

## K-12 Energy Education Resources

Organization	Contact Information	Website	Teacher Training	Curriculum Resources	Michigan Field Trip Options	Notes
<b>Michigan Energy Office, Energy Smart Schools</b>	Tim Shireman, Energy Office, P.O. Box 30221 Lansing, MI 48909 tashire@michigan.gov (517)241.6281	<a href="http://www.michigan.gov/documents/ESS_Incentive_Flier_2005-2006_119316_7.pdf">http://www.michigan.gov/documents/ESS_Incentive_Flier_2005-2006_119316_7.pdf</a>	✓			Michigan Public K-12 schools enrolled in the Rebuild Michigan program are eligible for energy education faculty, workshops, and materials. The program uses the school as an 'energy lab', explore alternative fuels and renewable energy, and encourage conservation and pollution reduction.
<b>Northern Options</b>	Northern Options, P.O. Box 655 Marquette, MI 49855 emily@northernoptions.org	<a href="http://www.northernoptions.org">www.northernoptions.org</a>	✓	✓		A recent Northern Options project is the Student Biodiesel Research program where they teamed up with Marquette High School. The school busses will use biofuel for six weeks and the students will be doing emissions tests to see how clean biofuel burns compared to regular diesel. They also offer tours of an energy efficient home.
<b>National Renewable Energy Laboratory</b>	Education Programs (303)275.3660	<a href="http://www.nrel.gov/education/resource.html">www.nrel.gov/education/resource.html</a>	✓			NREL offers 4-12th grade programs such as the National Middle School Science Bowl, Junior Solar Sprint/Hydrogen Fuel Cell Car Competition and a High School Science Bowl.
<b>Power Shift DVD</b>	Worldlink 38 Keyes Avenue, Box 17 San Francisco, CA 94129 (415)561.2141 info@powershiftnow.org	<a href="http://www.powershiftnow.org">www.powershiftnow.org</a>	✓			This is a 26minute DVD that targets middle school to high school students and features Cameron Diaz. Power Shift also offers accompanying curriculum.
<b>Solar Now</b>	100 Sohier Rd. The Sunroom Beverly, MA 1915 (978)927.9786 solarnow@comcast.net	<a href="http://www.solarnow.org/renergyfr.htm">www.solarnow.org/renergyfr.htm</a>	✓			Solar Now provides a curriculum framework which includes 1) Lists for educational goals for teachers, 2) Guides for teachers to create their own curricula, instructional material kits, assessment instruments and professional development activities, and 3) Empowerment Instruments for teachers and administrators.